**Air pressure is exerted in ­­­­\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ —down, up, and sideways. The air pressure pushing down on an object \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the air pressure pushing up on an object.**

• **Air pressure** is simply the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ exerted by the weight of air above.

• A **barometer** is a device used for measuring \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(*bar* = pressure, *metron* = measuring instrument).

**In a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ barometer, a tube is filled with mercury, then turned upside down in a dish of mercury. When air pressure increases, the mercury in the tube \_\_\_\_\_\_\_\_\_\_. When air pressure decreases, so does the height of the mercury column.**

**Wind is the result of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ differences in air pressure. Air flows from areas of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ pressure to areas of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ pressure.**

**The \_\_\_\_\_\_\_\_\_\_\_\_ heating of Earth’s surface generates pressure differences.**

**Solar radiation is the ultimate energy source for most \_\_\_\_\_\_\_\_\_\_\_\_.**

**Three factors combine to control wind: pressure differences, the \_\_\_\_\_\_\_\_\_\_\_ effect, and \_\_\_\_\_\_\_\_\_.**

• **Pressure gradient** is the amount of pressure change occurring over a given \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

• Isobars are lines on a map that connect places of \_\_\_\_\_\_\_\_\_\_\_\_ air pressure.

**Closely spaced isobars indicate a \_\_\_\_\_\_\_\_\_\_\_ pressure gradient and \_\_\_\_\_\_\_\_\_ winds. Widely spaced isobars indicate a \_\_\_\_\_\_\_\_\_\_\_ gradient and \_\_\_\_\_\_\_\_ winds.**

**The Coriolis effect describes how Earth’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ affects moving objects. All free-moving objects or fluids, including the wind, are deflected to the \_\_\_\_\_\_\_\_\_\_ of their path of motion in the Northern Hemisphere.**

**In the Southern Hemisphere, they are deflected to the \_\_\_\_\_\_\_\_.**

• **Jet streams** are fast-moving rivers of air near the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that travel between 120 and 240 km per hour in a west-to-east direction.